What is claimed is:

1.   An appearance inspection apparatus comprising:

a memory which stores image data of an appearance of an inspection target;

a thread generator which generates a plurality

5   of threads in each of which a procedure is described for independently processing the image data stored in said memory and storing a processing result into said memory; and

a plurality of CPUs which executes said

10 plurality of threads generated by said thread generator in parallel, respectively.

2.   The appearance inspection apparatus according to claim 1, wherein said thread generator generates k sets of n (k is a positive integer and n is an integer equal to or greater than 2) threads in which

5   procedures are described for respectively processing the image data in n sub-regions obtained by dividing one inspection region on the image data stored in said memory, and

said plurality of CPUs execute said k sets of

10 said n threads generated by said thread generator in parallel, respectively.

3.   The appearance inspection apparatus according to claim 2, wherein said thread generator further

generates m (m is a positive integer) threads in each
of which a procedure is described for collectively
5   processing the image data in said n sub-regions, and
said plurality of CPUs execute said k sets of
said n threads generated by said thread generator in
parallel, respectively, and one of said plurality of
CPUs singly executes said m threads generated by said
10   thread generator.

4.   The appearance inspection apparatus according to
claim 3, wherein said n and m are determined based on
a kind of image processing to be executed or a size of
said inspection region.

5.   The appearance inspection apparatus according to
claim 3, wherein said n and m are determined based on
a result of an actual measurement of processing times
of said plurality of CPUs under an arbitrary
5   combination of n and m.

6.   The appearance inspection apparatus according to
claim 2, wherein in each of said n threads, the
procedure is described for executing a predetermined
kind of image processing and another kind of image
5   processing in succession.

7.   The appearance inspection apparatus according to

claim 3, wherein in each of said n threads, the procedure is described for executing a predetermined kind of image processing and another kind of image

5 processing in succession.

8. The appearance inspection apparatus according to claim 1, wherein said thread generator generates at least n (n is an integer equal to or greater than 2) threads in which procedures are described for

5 respectively processing the image data in n inspection regions on the image data stored in said memory, and

said plurality of CPUs execute said n threads generated by said thread generator in parallel, respectively.

9. An appearance inspection method comprising:

storing image data of an appearance of an inspection target in a memory;

generating a plurality of threads in each of

5 which a procedure is described for independently processing the image data stored in the memory and storing a processing result into the memory; and

executing the generated plurality of threads in parallel.

10. The appearance inspection method according to claim 9, wherein said thread generating step generates

k sets of n (k is a positive integer and n is an integer equal to or greater than 2) threads in which

5 procedures are described for respectively processing the image data in n sub-regions obtained by dividing one inspection region on the image data stored in said memory, and

said executing step executes said generated k

10 sets of said n threads in parallel.

11.   The appearance inspection method according to claim 10, said thread generating step further generates m (m is a positive integer) threads in each of which a procedure is described for collectively

5 processing the image data in said n sub-regions, and said executing step further executes said generated m threads in serial.

12.   The appearance inspection method according to claim 11, wherein said n and m are determined based on a kind of image processing to be executed or a size of said inspection region.

13.   The appearance inspection method according to claim 11, wherein said n and m are determined based on a result of an actual measurement of processing times executed under an arbitrary combination of n and m.

14.   The appearance inspection method according to claim 10, wherein in each of said n threads, the procedure is described for executing a predetermined kind of image processing and another kind of image

5 processing in succession.

15.   The appearance inspection method according to claim 11, wherein in each of said n threads, the procedure is described for executing a predetermined kind of image processing and another kind of image

5 processing in succession.

16.   The appearance inspection method according to claim 9, wherein said thread generating step generates at least n (n is an integer equal to or greater than 2) threads in which procedures are described for

5 respectively processing the image data in n inspection regions on the image data stored in said memory, and

    said executing step executes said generated n threads in parallel.